THE PASSPORT HOUSE LETTER

A Journal of Apple II Development • May, 1993

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Passport House answers the name question

ONE of the most common questions we get in our mail is about our name. "Why Passport House?" and "What does it mean for Apple II users?" are regular questions. To clarify: the monthly Apple II publication we print is the "Passport House Letter," and we, the group that publishes it, are "Passport House."

The "Passport" part comes from our international focus. We try to dig up stuff from all over. The Apple II, as one of the first personal computers, has also been scattered around the world to a greater degree than most. It makes sense for a group seeking to cover Apple II development to cover work worldwide. In fact, some of the best work, especially noncommercial work, comes from other parts of the globe.

The "House" part of our name comes from the fact that we're publishers, as in: "we're a publishing house." And the "Letter" part comes from the fact that what we publish is a newsletter.

Why We're a Newsletter

We chose to do a newsletter for several reasons. First, with the reduced amount of money in the Apple II community, publishing a professional monthly magazine for the Apple II would obviously be impractical. Even mail order giant Quality Computers, who takes in most of the money available in the II universe, didn't swing for a monthly publication. It's too expensive and complicated.

Second, fancy magazines require their material to be completed months in advance so that it can be typeset around graphics. Our whole purpose in starting the Passport House Letter was to bring news to users who need it—as soon as possible.

If users don't know what's going on, they get the idea that nothing is happening. And that's not the case. Independent developers are constantly churning out practical Apple II applications—often at minimal cost.

Advantages of a Newsletter

Our newsletter format allows us to get news and features out on a regular basis at low cost. That means that we don't have to rely on—or cater to—advertisers for the big bucks needed to run a magazine. We write in the interests of our readers.

In addition, we can get news out fast because we can afford to publish monthly. Our twelve to sixteen page Letter could be a twenty-four to thirty-two page bimonthly, but at least half of it would be two months old. We'd rather pay for postage twice than serve cold food.

As well, publishing a newsletter is possible right from the Apple II. All the work that goes into the Passport House Letter is done on Apple II equipment. We couldn't get the regular experience we have in working on the Apple II typesetting a fancy magazine on a Mac. Instead, we use the same tools available to our readers to complete out publication. And we gain valuable new insights on using the II every day, insights we're able to share with our readers.

Please support our work by sharing news about us with fellow Apple II users. We're being supported primarily through reader's subscriptions, quite a feat for $24 a year (most limited interest newsletters price their work at $125 or more per year, often for just four or six issues annually).

New Developments on the Horizon

Next month, we'll be covering Apple Expo West, being held right now in San Francisco. There's all kinds of work currently in progress. Expect us to be here to dig it up for you each month.

Interested in subscribing to the Passport House Letter?

Get a full update on what's happening in the Apple II world every month. When you subscribe to the Passport House Letter, you get all this for just two bucks a month:

- Complete product reviews and comparisons in Test Drive.
- Maximum Overdrive: how you can squeeze more performance from your Apple II.
- The latest news and new product reports available.
- A regular look inside the realm of Apple II developers, in Industry People.
- Special Reports on technology you can put to work

All of this and more for just $24 per year. Join today and don't miss a thing!

QUESTIONS & COMMENTS

Greetings from Alaska.

So far I am enjoying your publication very much. It is very informative and is covering things that I am doing with my IIGS. I am sending $5.00 cash for the March 1993 Shareware/demo/beta disk that you have put together.

Thank you for your trouble and I hope that you are successful in you publication. I am spreading the word to my Apple friends and to our Apple User Group. You might be surprised to know that there is a very large and loyal group of Apple users in Alaska.

Ken Duncan
Anchorage, AK

To whom it may concern:

Enclosed please find a check for $24, for a subscription to the newsletter. It's professional and a well-done professional at that.

Carl Judy
Harrisburg, PA

Dear Passport House Letter,

You state in your Premier Issue, January 1993, on page 2 that the Passport House Newsletter is published on Apple II computer equipment. This is comforting news to me, but I do have one question. I am at a loss as to why the print on my letter does not have the quality as does your newsletter. How do you get such quality print? My letter was typed with AppleWorks GS using WestCode Pointless version 2.0 and printed with a Hewlett Packard DeskJet 500C printer. I also have an ImageWriter II but the quality still does not compare to your newsletter.

I have tons of genealogy information I want to put together in a newsletter for my immediate family but have been waiting to do so because I have not yet found out the secret to good quality print outs. Are you willing to share your secret?

Frank Morales III
Lindsay, CA

Frank, we're flattered! We don't have any closely guarded secrets, though. We're planning an upcoming article dealing with printers and getting good print quality, something I'm sure many of our readers are interested in.

There are a few things that I think you'll find interesting, however. First off, you might try investing in better paper for your jet ink printer. Ink printers spray ink onto the paper to create an image. If the paper is too absorbent, the ink will wick into the fibre of the paper, creating a washed-out look.

Using a premium quality paper will help in that its harder, flatter surface won't immediately absorb the ink, but rather allow it to dry in place. One source you might try for good paper is:

Paper Direct
205 Chubb Avenue
Lyndhurst, NJ 07071
(800) A-PAPERS

Paper Direct offers all kinds of specialty papers for desktop publishers at reasonable prices. Their basic Weyerhaeuser First Choice is especially good for use with ink jet printers.

They also offer more expensive specialty papers for ink jets, as well as labels, envelopes, vellum paper, laser foil and more.

As for your software, remember that the driver controlling your printer is the only part of the software that can really effect print quality. Drivers make use of Pointless to generate larger fonts; you probably already know that.

GS/OS based software doesn't have anything to so with printing, (unless it attempts to perform the printing itself, which is not recommended procedure) so your program shouldn't matter.

Stay tuned! We'll be looking into comparisons between various printers and other quality techniques in our upcoming issue.

And lest anyone doubt, we do use a similar setup as Morales, even making use of an ink jet printer (the 360 dpi StyleWriter) for output.

Dear Passport House,

I must commend you on the brilliant work you are doing. Your articles are covering things I've wanted to know about. Few computer magazines are written as clearly and intelligently as yours. Passport House is a definite asset to the Apple II community.

Michael James Brian
Brooklyn Heights, NY

THE PASSPORT HOUSE LETTER

A Journal of Apple II Development • May, 1993

THE PASSPORT HOUSE LETTER

Each month, The Letter reports on new development, examines available products, interviews industry people and shares productive ideas. Passport House publishes The Letter on Apple II computer equipment for the benefit and enjoyment of an international readership. This publication is protected by copyright and may not be reproduced in any way without the express permission of Passport House.

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OUR OPINION

Developing New Basics for the II

WHAT kind of development does the Apple II really need? Unlike the much larger and much more commercial Mac market, the II market isn't a good place for fierce competition. There isn't really room for winners and losers.

The whole community suffers for every developer that gets squashed or simply leaves the Apple II market. If you are a developer, you know that to stay alive, you need to fill a need. Where is the need?

Focusing on Useful New Basics

The Apple II needs support that enables new basics, new functions either system-wide to users, as tools for programmers or through external expansion.

One of the biggest recent successes is Pointless. It offers users the sudden new ability to dramatically improve their output, using their current software.

Pointless is a example of a basic new system wide development for II users. With new basics added system wide, we've suddenly got a more powerful system.

UNIX, one of the most widely used operating systems in business, government and education, works kind of like that. Designs hinge upon simple, basic tasks that can be used to build upon each other.

We'd like to see more work done in the area of making building blocks that can be used to build on and improve the way we work on II's.

What kind of basics are needed on the system wide level? How about an example: just as Pointless provided scalable text on a system wide level, there is a need to be able to produce scalable graphics.

More programs can handle text than graphics, so why not implement graphics as text? How about an object oriented draw program that saves you work as legal TrueType characters. Design your logo, for example, and save it as a character in your own TrueType font. In any application supporting text you could call up the graphic by selecting your font and typing the corresponding letter. Pointless would scale it to the "point size" you like. When you print, you'll get the same scaling Pointless does for text to get smooth output.

Implementing New Basics As Software Tools

Most users may not think about it, but two software tools available to programmers, designed to integrate SoundSmith and NoiseTracker MOD sound files into other programs, have been put to use in a variety of games, utilities and stand-alone applications. The extra work needed to add sound into their new products was negated by the availability of the tools—making new products' development faster and smoother.

That's close to object oriented programming. The new trend is toward using building block objects in place of the standard do-it-all-yourself mode programming. By presenting other programmers with useful tools to employ in their work, development as a whole can be accelerated.

Integrating External New Basics

On the flip side are programs designed to integrate tool-like functions into themselves. DreamGraphix, for example, can load in functions called "Externals" that put new powers into the hands of basic users. New paint functions can be integrated into the programs toolbar, for example, extending the usefulness and capability of the application.

The new "Finder Extras" allow the basic Finder to be extended beyond imagination. Finder Extras allow selected files to be modified (encode a file, compress it, change its file type or convert to another format) or executed (play a song file or display a graphic).

Both DreamGraphix and Finder 6.0 are good examples of giving external expansion thoughtful consideration. It's unfortunate that more developers don't give attention to expansion potential.

AppleWorks GS, with its complex innerworkings, is hard to jump into and modify. Had expansion been designed into the program, adding new functions to its various modules would be a snap. Third party programmers could adopt users and provide new functions for them.

Developers, put extra thought making your work expandable. Incorporate useful functions into software tools that can be used by other programmers. And consider presenting new functions as system wide enhancements rather than stand-alone programs.

The Apple Example

Apple Computer, in spite of its neglect of the II, has served to extend the II's lifetime. The Apple II's were built to be expanded. And with GS/OS, Apple has produced a very extendable operating system for the II. GS/OS isn't tied to anything but the computer itself.

You can swap file systems with FSTs; instantly install support for new storage and input devices with device drivers; print to new printers with new printer drivers; talk through new interfaces or in improved ways with new port drivers and more. And how about resource driven architecture, that allows for the dynamic alteration of data within a program without messing in code?

All of these are examples of smart design and future thinking. Steal a page of Apple's book and incorporate similar thinking into your own work.

TEST DRIVE

ShadowWriter 1.1

André Horstmann	Full featured text editor
Höhenweg 3d	—
CH—6300 Zug	NDA / Finder Extra
SWITZERLAND	Freeware

IT IS SAID that the best things in life are free. A new freeware New Desk Accessory text editor is a good example. André Horstmann, of Switzerland's Bright Software, is distributing ShadowWriter 1.1 as freeware.

While ShadowWriter is not intended to be a full word processor, it is a powerful and useful tool many users will find to be just the thing for tasks that don't require the special functions top-end programs offer, such as page header and footers and other extraneous features. In a era where word processor have become mega programs requiring massive amounts of disk space and memory, ShadowWriter is a welcome sight.

And if you've ever waited for Teach to load just to read a short documentation file, you'll really enjoy the convenience of ShadowWriter. It's an NDA, but also functions as a Finder Extra. As such, it can direct the new Finder 6.0 to open it, rather than Teach, when you double click on a text or Teach file, or to use it to print selected files from the Finder.

The Interface

The first thing I noticed about ShadowWriter was that, like the new standard Mac DAs, it displayed a small (pencil) icon before its name in the Apple menu. NDA DEVELOPERS TAKE NOTE: I immediately wanted all my other Apple menu items to have similar icons.

Beyond that cosmetic note, ShadowWriter opens a standard window with a pale yellow menu bar below the title bar. Few IIGS applications make use of menu bars in windows, so it may take you a while to adjust to the new, secondary menu bar arrangement.

The first menu is an Apple menu, offering "About..." and "Preferences..." selections. Under Preferences, you can set two default fonts for use when opening a file, one for regular Teach files, and one for text files (so you can open text files with a monospaced font, such a Courier or Monaco.) Among other preferences is an option for a hot key command to open ShadowWriter.

A File menu offers the basic file commands (opening text, Teach and SRC files, and saving as text or Teach), and also sports a special Load File... selection. Load File allows you to open any file and display it as text. While opening most non-text files will yield just garbage text, it's very useful for peeking into files without having to modify the file's file type to "text".

Under the Edit menu, besides the basics you'll find a find and replace option that displays a movable modal dialog, as well as Modify Text, a unique function that allows users to strip highbits (don't do this unless you know what you are doing), strip control characters, convert special characters in text to different language formats and encode text with password protection.

The Layout menu offers the ability to apply fonts and colors to text, and basic controls to set a left margin, indentation, justification and line spacing. The Document menu displays information the file you're currently working on and a list of other files open in memory under ShadowWriter.

Other Features

ShadowWriter allows up to eight Teach, text or SRC files open at once. But unlike most multiple-document applications, ShadowWriter doesn't open a new window when you open a document or start a new one. Rather, it present the new document and stores the previous ones invisibly in memory. You can call up latent documents by choosing them from the Document menu.

This method keeps down screen clutter and simplifies arrangement of windows, but again requires an adjustment in thought. ShadowWriter changes the size of the window when switching to another file from the Document menu, a mildly annoying thing that can be changed via modifying the ShadowWriter resource fork, but not from the preferences menu.

ShadowWriter handed bigger text documents with greater aplomb than the word processor of AppleWorks GS. With the 300 K text file I loaded into ShadowWriter, I noticed that it loaded faster and changed fonts quicker than AWGS does. It also selected all text immediately, a "feat" AWGS stumbles at on long documents. Irritatingly, ShadowWriter insists on going to the beginning of the document after you Select All.

ShadowWriter does what it was designed to do very well. But until ShadowWriter can check spelling, I'll still be regularly using the AWGS' word processor.

New Version 1.2

Shortly ago, Horstmann released ShadowWriter 1.2 as beta. The new version is publicly available, but designated for beta testers only. After using the new 1.2 for some time, I found few dangerous bugs; it crashed once. There was a good handful of new features, however.

The primary new feature is the ruler bar, which displays the indentation and margins, as well as offering controls for setting justification, and pop up menus to set font, style and size. Included in the ruler but not yet supported is a tab well for setting discrete tabs and ruler marks to visually setting indent and margins.

The Layout:Set Ruler menu selection now lets you let left and right margins, as well as the indent, in pixels. Documentation noted that the next version will include the ability to set these in inches and centimeters as well. Right now, the inches or centimeters controls exist but only effect the layout of the ruler.

Open now supports multiple files to be selected to open at once; Save As allows files to be saved as SRC files; scrolling is faster, as is Find and Replace action; a word count has been added to the Document:Text Info menu selection and a second simple encode function has been added to the Modify Text dialog.

ShadowWriter is also now supporting InterProcess Communication, allowing other application to use it as their own word processor. Using special calls, ShadowWriter could be used from other applications to modify or format text and print out text or Teach documents.

Recommendations

ShadowWriter is a very useful utility; it's a great pocket word processor optimized for popping off notes, jotting in ideas as they come to you, even loading in large text files. And WOW! it's a free gift from Horstmann (send the man a postcard!). Throw away Teach (it can't open files of any size anyway) and pick up ShadowWriter.

Horstmann is responsive to outside suggestions and actively supporting development of the product.

TEST DRIVE

Limited Edition DuelTris

Steven Chiang	Two Player Falling Tiles Game
DreamWorld Software	—
PO Box 830	Stand-alone application
Iowa City, IA 52244-0830	$20 Shareware

DUELTRIS is the latest product from Steven Chiang at DreamWorld Software. They refer to the new game as shareware, but DuelTris outshines most commercial arcade games available anywhere for the IIGS. The Limited Edition version comes in a 3.5" jewel case (similar to those used for CDs) with a small but informative instruction booklet.

Arcade games should be fun, fast and addictive. By that measure, DuelTris is a first class winner. Besides playing a great game, DuelTris delivers stunning visuals (thanks to 256 and 3200 color art by David Seah using DreamWorld's DreamGraphix paint package) and a rock soundtrack by James Brookes that together turn your game session into a personal trip to your own nickel arcade—sans nickles.

Tetris for Two

DuelTris is more than just a Tetris knock off. Tetris, the popular game of arranging falling tiles to complete lines, originated in Russia. Since its arrival here, it has seen a lot of copies. But DuelTris is more than a new copy; it takes the idea of the game and makes it an interactive two player system.

Playing by yourself, the game is fun and addictive. But pair up with a competitor—a friend or the computer—and the duel begins. With DuelLink mode on, every time a player completes at least two lines, up to four unfinished lines are sent to the other player. The extra lines push the other player closer to loosing the round; at the same time, the competing player's current piece disappears, making the situation even worse.

DuelLink adds a new dimension to the game, making last minute turn arounds possible. But the game is still based on skilled placement of the falling pieces, so don't expect to win unless you play hard!

Special Tiles

In addition to the common blocks, there are lettered blocks that, when cleared, perform special tricks. One inverses the opposing player's key controls. Inverse is very frustrating when it happens to you; fortunately, you can turn it off if you'd rather do without the extra challenge.

There's a shoot gun that allows you to blow away offending blocks as fast as you can, as well as a fill gun, that shoots blocks. Fill in the cracks to clear away built up levels of incomplete lines.

The anvil will clean out a line of blocks all the way down the screen, a bomb blows out the first adjacent blocks it touches (so steer it to a strategic position) and four line block will clear out the four lines above it when its own line gets completed. By effectively using these special tools, a player can reduce a nearly full screen to nothing right away.

Two Players

When playing against another person, each can, with the intuitive desktop settings screen, set the keyboard controls they want for left, right, drop and rotate.

VS mode lets two players (one can be the computer) duke out a series of games, recording your competing scores as you go. After each game, you have option to continue.

The computer can make a hard to beat competitor; I found it hard to believe how many games I had played against the computer—and successively lost. But I liked the ability to see how many games I'd played with the versus scoring.

One Player

Playing alone seems a lot easier after having lost so many games to others. If you're up late into the night playing, you may want to turn off the music. You can also turn off the sound effects, but I thought the clunking of blocks and instrument hit that accompanies a line clearing were too cool to mute. The next piece display (showing the next piece in line to fall) can be disabled as well the special pieces (the guns, anvils and bombs described above), if you'd prefer a more mundane game.

Also, when playing alone, the speed of the game progressively increases. In two player mode, the game speeds up and slows down throughout the game, so there are no discrete levels.

Other Details

Included with the game are standard tiles and a more wildly colored alternate set. In addition, a DreamGraphix "External" is included to allow creation of tiles with your own color scheme. Externals are add-on modules that bring new functions to DreamGraphix.

The small manual included with the Limited Edition version includes technical notes describing the graphic techniques used and makes some interesting comments about the development of the game, a welcome bit of details.

One would have to look long and hard to find anything wrong with the game; there is a typographical error in the manual under "Changing Keyboard Controls," where an errant paragraph appears out of nowhere and confuses the section. However, it is unlikely anyone would need help in figuring out the easy-to-use key controls dialog in the game. Even after long games, there were no crashes, screen freaks or other surprises.

Recommendations

There's certainly no reason not to get DuelTris. Don't bother wasting the online time to download the publicly available version. Send your twenty bucks to DreamWorld for the real one. Even if you loathe games, having DuelTris will give you a great trump to show your friends from other platforms what your IIGS can do. We'll be watching DreamWorld for more great stuff.

TEST DRIVE

AntWars

Karl Bunker	Strategy attack game
Independant Developer	—
59 Parkman Street	Stand alone application
Brookline, MA 02146	$10 Shareware

ANT WARS is new shareware from Karl Bunker. In the game, you control an army of red ants in a battle with black ants. It's along the lines of a fast checkers game, with ants serving as your pawns.

The game action goes on in a grid. Using the mouse, click on the red ants and then drag them into the desired block. You kill black ants by cornering them between two of your own.

Continues on page 8

After buying a new drive to complement your Apple II, you'll need to hook it up. Fortunately, Apple's design makes it easy to add any kind of device to your II, from a simple floppy to mass storage drives—leave dealing with IRQs and other peculiarities to your IBM friends.

Getting your computer to recognize your drive sometimes involves a little more than hooking the two up. You might need additional hardware support, the operating system may impose limitations on the drives it will recognize or you many need extra software in the form of device drivers. We've complied the following information to assist in understanding how drives interface with your system.

Articles in this series are designed to complement each other. In each issue, we build another level on the discussion. The series isn't designed to be a technical reference, but a guide in understanding storage media devices. So jump aboard and hang on in...

The Great Disk Drive

Part 2: The Interface Level

On the interface level, we'll consider the various types of interfaces you can use to hook up drives to your II. As well, we'll examine briefly how the operating system involves itself with these interfaces. In upcoming issues, we'll look deeper into the operating system level and present information about file systems, practical data organization, and simple maintenance you can do to ensure data integrity.

The Disk II Controller

The Apple II arrived before the disk drive, so adding a drive to the original II's required adding a disk interface card. This controller card includes software support in ROM, called firmware, that allows the drive to work with the computer.

Even the later appearing IIe requires an interface card to use disk drives. The original card allowed the use of either two 5.25" Disk II drives or later, the double-5.25"-drive-in-a-box DuoDisk, which premiered in 1984. In the next year, Apple released the UniDisk, a single 5.25" drive that allowed the second drive to be chained from it.

Apple later designed a 3.5" drive for use on the II, using a similar mechanism as with the Mac. Unlike the Mac's, Apple's original drive for the Apple II, the UniDisk 3.5" drive, was an intelligent drive, having its own microprocessor. As an intelligent device, it expects a stream of high level instructions from the computer.

The Apple IIe got a new controller to use this drive; 5.25" drive controllers were placed in slot 6, and the newer 3.5" drive controller in slot 5. The IIc was built with support for both kinds of drives.

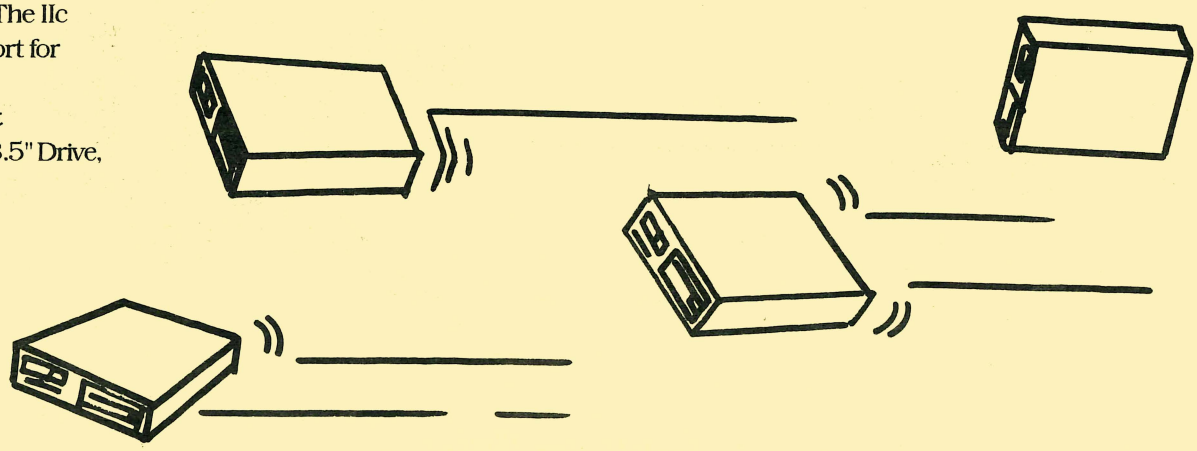
The SmartPort

The later Apple 3.5" Drive, designed for the Apple IIGS, works on the Mac as well, but not with earlier II's. This is because the new 3.5" was a basic mechanism designed to be controlled directly by the computer. The Disk II interface of earlier II's don't have enough speed to control the drive.

Like a RAM- or ROMdisk, the Apple 3.5" Drive has no internal intelligence. The IIGS can use both the smart and dumb 3.5" devices designed for Apple II's, as well as 5.25" drives, all through the same "SmartPort" by daisy chaining them together. The IIGS contains the Integrated Woz Machine, a specialized chip that integrates (and extends upon) the functions provided by the original Disk II controller card.

SmartPort refers not only to the physical electrical connection on the IIGS, but the firmware support built into the IIGS ROM as well. This firmware supports the above mentioned devices as well as IIGS RAM- and ROMdisks. The SmartPort automatically maps devices to the slot they should appear in; 5.25" drives appear to be connected to a controller in slot six, while 3.5" and RAMdisk drives are mapped to appear to be in slot five. Because of ProDOS limitations, additional drives may be remapped to slot two.

While many floppy drives can be chained together on a IIGS, the fact that they are all powered by the computer creates an electrical limit of about four. In reality, with the



inexpensive availability of hard disks, having more than a couple disk drives is impractical.

A Smarter Port

Apple's newly released 3.5" high density controller for the Apple II is an extension to the SmartPort system. It uses a Super version of the Integrated Woz Machine. The SIWM allows use of the MFM high density floppy drive ("SuperDrive") used on the later Macintoshs.

By adding the card to a IIe, you get about the functional equivalent of the IIGS' built in disk support, in addition to high density support. But don't think of it as a reason to put off upgrading to the IIGS! The IIGS can, via its 16-bit GS/OS, read and write, not only ProDOS high density, but also Mac formatted high density—and with the upcoming MS-DOS FST, both 720 K and 1.44 MB IBM formatted disks.

Before you run out to buy the card and a Apple SuperDrive, you might consider buying into Floptical technology. You get not only a high density floppy drive but also 21 MB Floptical support; then too, it hooks onto your SCSI chain (or gives you a reason to start one) rather than making you buy an additional controller card.

The difference between the SuperDrive and Floptical mechanisms—besides the Floptical part, of course—is that the Floptical drive doesn't handle GCR low level formats. That means that the Floptical, like the SuperDrive, will format, read and write Mac and ProDOS high density, as well as IBM 720 K and 1.44 MB with the forthcoming MS-DOS FST, but not Apple 800 K disks. Likely, though, you already have a drive that can do that.

The SCSI Universe

Small Systems Computer Interface, or SCSI, is the Apple standard for interfacing hard drives and related devices. It allows eight devices to be chained together and delivers high speed data transfers. SCSI devices range from printers to scanners to monitors, although there is little or no support on the Apple II for these other devices. Apple II users buy SCSI for disk storage.

Many types of drives come in the SCSI flavor; last month we looked at hard drives, streaming tape backup drives, removable cartridge drives, Flopticals, CD-ROM and optical drives. By adding a SCSI interface card to your Apple II, you make it a SCSI device ready to chain up with others. No Apple II's were built with SCSI support; you'll have to add a card—if you have a slotless II, your out of luck.

There's two choices in the Apple II SCSI interface world: Apple's Hi-Speed SCSI Card and C.V. Technology's RamFAST. Apple's card uses Direct Memory Addressing to speed up transfers; DMA bypasses the computer's processor to write data directly to memory.

The RamFAST uses DMA as well, but also employs RAM catching to speed up reads and writes even more. Note that some memory cards, most notoriously Applied Engineering's, are not DMA compatible. If you have a DMA conflict, you'll have to either suffer the speed loss of turning DMA off or replace your memory card.

Making a SCSI Chain

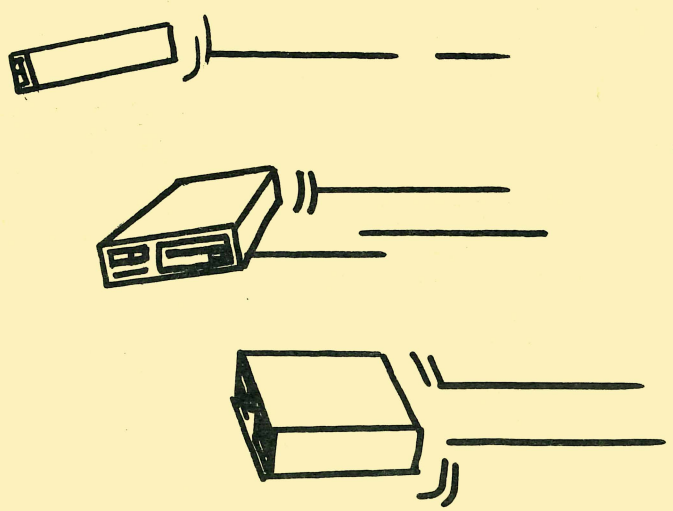
Assembling a SCSI device chain is a simple task. Each device needs a unique SCSI ID number. Note that this number has nothing to do with Apple II slots; the SCSI ID is used for device identification and prioritization. The computer (interface card) is generally given ID seven. Devices on the chain can be anything from six through zero. Numbers don't have to be assigned in order or sequentially, but most often devices should be given the highest numbers.

Don't use more than 20 feet (6.5 meters) of cable in the SCSI chain, and be sure to have terminators on both ends—but nowhere in the middle—of the chain. Proper termination prevents signals from interfering with each other.

Many devices are internally terminated. Use a device with internal termination at the end of the chain. If you have more than one internally terminated device to add to your chain, be sure to remove or disable termination from all devices accept the end one. If none are terminated, you'll have to add a terminator to the last device on the chain. The computer's SCSI interface card usually provides termination for the beginning of the chain.

The IDE Interface

Other hard disk interfaces are available; the internal hard



"Test Drive: Ant Wars" continues...

Black ants maraud randomly about the screen, cornering and killing your ants.

On occasion, one of your ants will turn orange for a short time (a thermometer control gives you a countdown) to become a "bezerker ant." During this time, you can grab hold of it and kill as many black ants as possible just by touching them with your bezerker.

Sound effects liven up the gameplay, which is quick and involving. For ten dollar shareware, the game is stable and interesting enough to send in shareware money.

The Interface

Ant Wars plays in 320 mode. Unfortunately, the game makes little use of the colors available in 320 mode. The play area is pretty bleak and very much feels like just plain basic shareware. We'd like to have seen either a fancier interface in 320 or a bigger play area in 640 mode for a stand alone application.

It almost feels like a waste of time to wait for a small and simple game to boot up as a seperate application. We'd rather it be available for a quick play as a desk accessory.

Recommendations

If you like games, download Ant Wars and try it out. Better yet, send five bucks or so to Karl Bunker and request his "Bunker.Ware" disk. On it is a lot of shareware and freeware stuff he's done. You might like some of his more serious stuff better.

"Eran Paige" continues...

of explosive color, electing the responce of:

1) WOW! look at the 3200 amazing, photographically rendering and exciting colors! Or...

2) COOL! see the 256 blending, throbbing , life giving colors! Or...

3) YEEA, sixteen artfully and thoughtfully placed colors...butinstead...

4) HMMM, sacrifice an eyeball on the gawkishly horrid, frighteningly morbid, excruciatingly dull and bland and generally pukey-gross arrangement of ugly, bad, flaccid tones.

Other Uglys

Poor use of color isn't the only bugaboo I care to rant about. Screens cluttered with endless numbers of grey check boxes, radio buttons and other boring controls surely contribute to an ugly environment.

Or how about controls that don't work right? A recent commercial program (that you pay big bucks for) features a pop up control to select either file types or fonts—I forget. Anyway, if you choose a selection with a long label, the menu displays the first half of the name and cuts the end off. It looks sloppy.

In a big market, like that of the Macintosh, such a product probably wouldn't sell. You could choose a competitor's version. Yet the II's market isn't big enough to support the idealistic fantasy of the free market. We take what we can get—and in some cases, what we get is exceptionally great. Steven Chiang's new DuelTris (reviewed in this issue) is a great example of a warm and welcoming environment. The Finder 6.0 from Apple is a very nice application of the standard guidelines. Kangaroo spruces up Standard Files is a eye pleasing way. Of course, there are limits to what the II can display, but developers with good taste can always tailor an esthetically pleasing interface.

I'd like to encourage developers to pay added attention to the esthetics of what they produce. While a program may be of brainy design, people judge first by looks. Make that first impression pleasing.

Review the Apple interface bible and follow their suggestions. Apple bungled on marketing the II, but it knows its interfaces. And their ideas are worth using.

"The Great Disk Drive" continues...

drives once sold by Applied Ingenuity (later Ingenuity Inc.) and Applied Engineering were IDE based and were supplied with proprietary interface cards.

IDE is marginally cheaper, but does not allow for expansion chaining. In view of the small price difference between SCSI and IDE and IDE's lack of expansion potential, we don't in general recommend buying IDE drives for use with the Apple II.

Operating Systems and the Drive Interface

The term "operating system" can be defined in a lot of different ways. Throughout the history of personal computers, the role of the operating system has changed from simply allowing disk access to providing robust system control.

The first widely available software system for the Apple II was AppleDOS 3.3. DOS 3.3 was internally designed to talk directly to the original Disk II. There is no support for any other type of drive. There are modified versions of DOS that allow use of other devices; however, DOS 3.3 was not designed to be extendable.

ProDOS supports various disk drives, including 5.25", 3.5" and hard disks. ProDOS limits devices to 32 MB, however. To use a large hard disk, you'll have to partition it into 32 MB or smaller partitions, each of which acts as a separate device.

GS/OS supports all types of drive devices via software device drivers. Unlike ProDOS, GS/OS doesn't carry the 32 MB limitation on volume sizes. Using another file system, through its corresponding FST, larger volumes can be used than the ProDOS file system allows. Of course, ProDOS based applications will not recognize volumes created under another file system.

On The Level

The brief notes above certainly don't cover the real scope of the operating system's role in organizing files and volumes. We'll present information on how you can better manage your files and organize your disk drive file structure in a coming issue. Watch for "The Great Disk Drive, Part 3: The Operating System Level."

Companies Mentioned in this Article

Apple Computer, Inc.
20525 Mariani Ave.
Cupertino, CA 95014
(408)996-1010

C. V. Technology
9431 Saddlebrook Ln, Ste 2
Dayton, OH 45440
(513)453-5743

NEW PRODUCTS

The Lost Treasures of Infocom
Big Red Computer Club
423 Norfolk Avenue
Norfolk, NE 68701

Remember the plethora of text adventure games produced by Infocom? They're back. The Lost Treasures of Infocom package is a collection of twenty titles, including manuals and hint books.

While the Macintosh and MS-DOS versions of the package have been available for some time, an Apple II version has suffered delays in release. Big Red will soon be releasing The lost Treasures package for the IIGS at $59.95.

Express 2.0
Seven Hills Software
2310 Oxford Road
Tallahassee, FL 32304-3930
(904) 575-0566

Express 2.0 a spooling port driver for GS/OS. It allows users to regain control of the computer while the printer continues to print. Print files, "spools," can be saved to disk for later printing.

The new version offers increased speed with standard serial ports, using more intelligent port control. Control can also be manually set for better performance with parallel interfaces. The location Express uses to save spools can now be set as well.

Users who bought Express before January 1, 1993 can upgrade for $3.50 postage and handling upon proof of purchase date; other users may upgrade for $16 (includes postage and handling).

BASIC Programmers Workshop
Morgan Davis Group
10079 Nuerto Lane
Rancho San Diego, CA 91977-7132
(619) 670-0563

The BASIC Programmer's Workshop is a bundle of three popular Applesoft BASIC programming tools: MD-BASIC 2.0, RADE 1.0 and the Object Module Manager 1.3. The collection of BASIC programming tools offers Apple IIGS users a substantial savings over the combined regular retail price of the individual programs.

"The BASIC Programmers Workshop is a great value," says company president Morgan Davis. "Create your own programs with MD-BASIC, test them with RADE and be impressed by the power of the OMM when you run them."

MD-BASIC is a professional Applesoft BASIC development tool for creating programs using the IIGS desktop interface or any command line shell. The new 2.0 version offers a desktop mode with multiple windows and integrated text editing features, including choice of font styles, tab settings and search and replace.

It translates source code into highly optimized Applesoft programs that are smaller and faster than can be achieved in Applesoft's native "immediate" mode, yet still compatible with all Apple II computers. Users of Beagle Compiler can compile programs written with MD-BASIC for additional speed.

The MD-BASIC language is based on Applesoft with a number of extensions: free form layout, named labels, long and descriptive variable names, modern commands like IF-THEN-ELSE, WHILE-WEND, REPEAT-UNTIL and DO-LOOP—as well as features found in C compilers, like conditional code processing and #define macros. MD-BASIC catches mistakes like unbalanced parenthesis, undefined and unreferenced labels, misspelled variable names and other common errors before your programs run. The MD-BASIC 2.0 package includes sample source code, code libraries and a 100 page manual. MD-BASIC requires a IIGS running System 6.0.

RADE (the Real-time Applesoft Debugging Environment) is a full-featured diagnostic tool that isolates errors in real-time without disturbing the Applesoft environment. Execution of a program can be interrupted at any point to examine or change the contents of any variables, set breakpoints, step through code one line at a time or review the history buffer that records the entire debugging session. RADE comes with a 46 page manual and sample software that walks you through a complete debugging session.

The Object Module Manager is an extension manager for Applesoft programmers, making it possible to add external commands to enhance BASIC commands. Modules are loaded and unloaded as needed, using memory efficiently. Modules can also communicate with each other, making integration effortless. Developers can create their own custom modules

The OMM comes with sample source files in ORCA/M and Merlin assembler formats, sample programs, a starter set of modules—including AmperWorks, 35 new BASIC commands—and a 67 page manual. OMM works with the IIe, IIc and IIGS.

The BASIC Programmers Workshop is now available directly from the Morgan Davis Group for $99 (plus $7.95 shipping, or $17.95 overseas). California residents add sales tax. Institutional six-packs are available for $499 each.

Alone, MD-BASIC 2.0 is priced at $89.95, with a $30 upgrade available for owners of previous versions; RADE is $45.95; OMM 1.3 is $39.95, with a $20 upgrade. All orders should include $5 shipping, $15 overseas. Request Morgan Davis Group's free catalog.

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The following news and new product reports were derived from A2 News Digest, April 1993 edition written and compiled by Steve Weyhrich.

New Freeware: Wild Icons!

Jawaid Bayzar of Procyon Enterprises released as freeware Wild Icons! v1.1, a Finder extension that allows you to select icons in a Finder window by typing a wildcard. For example, you could select all the ShrinkIt files in a directory by typing "*.shk" and hitting the Select button.

"Wild Icons! works great with Switch-It! ," Bayzar stated "and I can foresee it making the up-and-coming HardPressed (and even AutoArk) much easier. You can select all the icons in a directory and then deselect all the ShrinkIt files, so the compression program won't try to

shrink them again. That sort of thing. Wild Icons! is really neat."

Look for Wild Icons! on the A2 Roundtable library at file #20370, or on your local BBS.

New Harmonie Drivers
Vitesse, Inc.
13909 Amar Road, Ste 2
La Puenta, CA 91746
(800) 777-7344

Vitesse, Inc. announced shipment of Harmonie 2.01. This upgrade includes color printer drivers for the DeskJet and DeskWriter models 500C and 550C. These new drivers include all of the features and functionality of the existing Harmonie drivers.

The cost of the upgrade is $14.95 plus $3.50 ($7.50 foreign) shipping. Orders placed on or after March 1, 1993 can get a free upgrade to Harmonie 2.01.

Vitesse also announced shipment of the HP Printer Pack. The new package includes all of the Harmonie printer drivers for Hewlett Packard printers including: the LaserJet II, IIp and III; DeskJet, 500, 500C and 550C; DeskWriter, C, 500C and 550C; PaintJet and PaintWriter printers. The suggested retail price for the HP Printer Pack is $29.95.

Salvation-Bakkup v2.0

Vitesse Inc. has announced Salvation-Bakkup v2.0. Vitesse's Lowell Erbe said that the cost of the upgrade is $39.95, just over half the cost of a new package.

This is more than some program upgrades in the Apple II world cost, but the reason for it is that it is not just an update and bug-fix, but rather an entirely new program with 100% new code.

Erbe said Salvation-Bakkup 2.0 "was redeveloped from the ground up ... some of the features that were included took a great deal of development. For example, we've added compression to reduce the number of floppy disks required. [Also,] we've added support for SCSI tape drives, high-density floppy disk drives, compression, sparse file packing, volume-to-volume backup, and data verification routines. In short, a great deal of time and development went into Salvation-Bakkup 2.0."

GSTape, ProSel 16 Bundle
Charlie's AppleSeeds
9081 Hadley Place
San Diego, CA 92126-1523
(619) 566-1297

Charlie's AppleSeeds has concluded arrangements with Tim Grams to bundle ProSel 16 with GSTape, creating a complete package for every Apple IIGS hard disk drive owner. GSTape provides tape drive backup to all major Apple II compatible tape drives, using either the Apple SCSI or RamFAST SCSI card

GSTape regularly sells for $35, ProSel 16 for $89.95, but for a limited time the ProSel 16+Tape bundle will be available directly from Charlie's AppleSeeds for $99.00.

AppleWorks Macro Enhancements
Office Productivity Software

"Office Productivity Software" announced AmperMacros Plus. Unfortuantely, they didn't leave an address. AmperMacros Plus is a set of enhancements for users of AppleWorks 3.0 and either UltraMacros 3.1 or UM 4.x who wish to write professional quality macros and task files.

The product contains 60 '&' commands for UltraMacros 3.1 users. The disk replaces the combined 36 commands previously available as AmperMacros and AmperMacros II . The program is now fully compatible with Total Control .

For macro programmers who have switched to using UM 4.x , the disk contains 50 external dot-commands, to bring all the same power to UM 4.x that the above &-commands bring to UltraMacros 3.1 . Both command sets include the same functionality except for a few &-commands which are equivalent to new features in UM 4.0 .

The disk also contains an AppleWorks Launcher Program for Apple IIGS users. This allows an AppleWorks data file icon to be double-clicked from the Finder in order to run AppleWorks and automatically load the selected file to the desktop.

The package is available for $30.00, which includes shipping.

Desktop Enhancer and The Manager

Steve McQueen of Simplexity Software posted a message regarding his product, Desktop Enhancer, a IIGS customization program that includes a screen blanker, and The Manager, from Seven Hills.

McQueen stated that Desktop Enhancer is believed to be fully compatible with The Manager from Seven Hills, although some harmless oddities will appear if the Hierarchic Init (used by The Manager) is loaded after the Desktop Enhancer Init at startup.

When the Hierarchic Init is loaded, it starts up QuickDraw II, causing your custom desktop picture or pattern to be displayed. It then shuts down QuickDraw II, allowing the startup icons for Inits and control panels to be displayed at the bottom of the screen. The custom desktop image will remain in place.

If Desktop Enhancer's blanking time is one minute, the addition of Hierarchic may cause the system to take more than 60 seconds to start up your Start application. This may cause the screen blanker to engage immediately upon startup of the first application.

Using ProSel-16 , Wings or another utility to reorder your System.Setup folder so that Hierarchic is loaded before the Simplexity Init will probably prevent both of these behaviors. Both are the logical result of the normal operation of Desktop Enhancer and Hierarchic , and do not indicate any problems. To prevent the screen blanker from engaging prematurely, you may also simply increase the screen saver delay time to at least 2 minutes.

A Floptical Experience

Daryl Baxter posted his experience in using a Floptical drive with his Apple II:

"I mentioned a couple of weeks ago that I had just purchased a Floptical drive, had just gotten the upgrade ROM chip v3.00L from Drew [at C.V.·

LATE NEWS

Technologies] for my RamFAST SCSI card and was going to have a 'comp session' over at my house with a couple of knowledgeable friends to assist me in checking things out on my IIGS using the new drive.

"All went well with these tasks and everyone was impressed. This is a rough estimate (anyone knowing should jump right in and help expand this statement), but it seems the Floptical is about three times faster reading and writing than a normal MFD-2DD 3.5 disk drive using ProDOS, and the 100Meg HD is about six times faster than the DD drive.

"I purchased my Floptical drive from Micro-Peripherals Engineering, Inc. located in Humble, Texas (15 miles easterly out from Houston) which is owned by Nisso Cordovi (a member of our local Houston Area Apple Users Group).

"It is, of course, an InSite mechanism inside a nice looking external case containing also a 5 amp power supply which is more than some other brands. It also works with an Apple IIe as Nisso has written a driver.

"His cost is $370.00 plus $7 S&H and Floptical disks [are] $18 each. He assembles them himself (small company operation at this point). He also sells hard drives (has to several friends and no problems at all). Nisso can be reached at (713) 358-4338 or by mail at 3814 Forest Village Dr. in Humble, Texas.

"Nisso tells me there is about a two or three week backorder delay since I bought mine from him as the interest in the Floptical is really mushrooming and the parts are getting slower in coming to him for assembling and fine tuning."

New Internet gateway

Morgan Davis Group announced μMDSS, a mail distribution subsystem protocol for UNIX systems. μMDSS makes possible the exchange of Internet electronic mail and news with microcomputers, like the Apple II, that are unable to communicate over traditional UUCP channels.

"Compared to a direct Internet connection—about $24,000 per year—and the complexities of special hardware and system administration, it's obvious why K-12 students and the computer-using community have been unable to use the Internet.

"It's supposed to be available to everyone, but it's too expensive," company President Morgan Davis said in a press release.

"We're building a network of Internet e-mail access points on inexpensive personal computers. Instead of pouring thousands of dollars into new hardware and monthly access fees, schools can retain their investment in yesterday's hardware and still get today's technology for the cost of a normal telephone bill."

μMDSS is like UUCP in many ways. μMDSS sites connect to UNIX hosts over serial-based connections. The caller logs in with an account name and password, then identifies itself by its site name and a secondary password. Session information is exchanged, and files begin moving between systems. When all files have been exchanged in both directions the session is complete.

μMDSS maintains site lock (LCK) files, session ".Status" files and a detailed log file. It also includes a uustat-like function for reporting job and connection statistics. Integration with local mail services is transparent.

At the transfer level, an X-Modem based 4K packet protocol provides near 100% or better transfer efficiency, and is compatible with high-speed modems and ports.

Client support is currently available for the Apple II through the ProLine BBS developed by Morgan Davis. The μMDSS host software is available for $56.95 per site, and can be mailed directly from MDG to a customer's electronic mailbox. The electronic package contains complete C code for compilation on most UNIX systems.

It also includes full documentation on installation and integration with local services such as smail and cnews. A six host site license is available for $299. For additional information, contact:

Morgan Davis Group
10079 Nuerto Lane
Rancho San Diego, CA 91977-7132
(619) 670-0563

Device Driver Sources

Can't find a driver for the device you desire? Following are a couple of sources you might try:

IIe Floptical driver

Micro-Peripherals Engineering
3814 Forest Village Drive
Humble, TX 77338
(713)358-4338

IIGS CD-ROM drivers

Trantor Systems LTD
5415 Randall Place
Fremont, CA 94538
(415)770-1400

Other IIGS disk drivers

Tulin Technology
2156 O'Toole Avenue
San Jose, CA 95131
(408)432-9057

PublishIt!4 Offer

Timeworks announced a special offer for PublishIt!4, a desktop publishing program for the enhanced Apple IIe or better.

Try PublishIt!4 for 30 days for only $7.70 shipping and handling. If you decide to keep the program, Timeworks will bill you $69. Or, if you already know you'll like it, prepay $69 for PublishIt! 4 and choose a Timeworks art or font pack free.

PublishIt!4 features multiple page views, auto text flow and hyphenation, imports text from AppleWorks 3.0 and supports several printers, including postscript lasers. Owners of previous versions of PublishIt! can upgrade to version 4 for $29.95.

Timeworks
625 Academy Drive
Northbrook, IL 60062-9695
(800)323-7744

ERAN PAIGE

Protecting the Environment

HOPE the title of this article doesn't put you on guard—I haven't taken up environmentalism as a religion or anything. I'm referring to the desktop environment.

It's in as much trouble as our rain forests. Late at night, while isolated from CNN's coverage of earthwide resource depletion and mismanagement, I find myself digging through shareware and old programs and rediscovering my personal hell: ugly programming. I'm not a programmer (and I don't play one on TV) so it's not the code I'm bothered about. Its the interface.

While Apple Computer, Inc. has long evangelized the cause of the consistent desktop metaphor, the Apple II has suffered through a rebellious and individualistic anarchy of mob programmers. Well, maybe the situation was not all that bad, but there was very little direction and a lot of I'll-do-what-I-want attitude. So that's all history anyway.

The point is that until lately—with the arrival of GS/OS, the first really organized Apple II operating system—there has generally been a freestyle approach to programming the II. Which isn't a problem until you decide that what you'd really like to see is the organized level of operation available on the Mac: Inter-Application Communication, multitasking and the like, all with a pretty and consistent face.

What it All Boils Down to

is the fact that the II has a history of unorganized programming. (Who was it that warned that BASIC was dangerous to the mind?) Not only are we left with a legacy, in our old age, of programs generally malcontent to run peacefully under a multitasking system, but with a do-it-yourself graphic design. Which, by the way, is the real point I've been working up to all along (in case you were wondering.)

Now, having introduced my point, I shall start making rapid advancement in making further points.

Apple used to refer to their desktop metaphor concept bible as the Apple Standard Interface Guidelines. Lately though, it seems they refer to the Apple interface as just Macintosh. Their recently revised the "Inside Macintosh" library, including in it the "Macintosh Interface Guidelines."

Has Apple given up actively encouraging Apple II developers to adopt the familiar Macintosh personality? Probably not entirely.

But Apple has clearly decided that the Apple II isn't going to be getting its due fifteen minutes of famous—Is it a case of the prodigal son not being welcomed home?

In any event, all of the independence has brought upon users of the II—and by that I'm speaking mainly about IIGS users, as 8-bit II's don't generally care about trying to have a system that works like the Mac—a scourge of ugly programs and utilities.

Beauty may be in the eye of the beholder, but almost anyone will recognize ugly as a statement of fact when they see it. Some programmers have a knack at making hideous interfaces. What makes the Macintosh look so slick is the eye for design that went into it, the same eye that designed the IIGS system software. Apple's programs all share the same style and grace.

Unfortunately, it takes no special talent to mix up Apple design elements—check boxes, scroll bars, pop up menus, thermometers and the like—and bake them into coyote-ugly screens from hell.

Apparently few people on this earth were born with the ability to arrange things with style and class. There has never, ever been another company able to design a computer screen with the elegance of Apple—save Steve Job's NeXT computer, and he WAS Apple.

Take a look at Amiga or Atari ST system software: It all seems like low contrast grey on blue, with hokey design elements and too-tiny-to-be-useful window controls. Or flip past Microsoft Windows in action. One would think that Microsoft's billions of bucks could produce something better than that. Gag.

When magazines review different "Graphic User Interfaces"—which has become a buzzword for IBM users who really want a Macintosh—they invaribly use the Mac interface as the standard and compare the others to it. True, Windows and other interfaces have introduced new concepts or ways of doing things that the Mac doesn't offer, but nobody beats the consistancy, intelligence, clarity and class of the Apple interface.

Back On The Subject Under Discussion

Yes, Apple is great at desktop design—but that doesn't mean that you can't do destruction with their tools. A plethora of simple desktop based stand-alone utilities and games bears that out.

Dropping into 320 mode from the Finder should mean an explosion of color. But upon leaving the four-colors-mixed-together-to-fake-sixteen mode of the Finder and related 640 mode applications, one often finds himself not in the world

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